

Linear Absolute Position Sensor

General information

This sensor uses an electronic board with microprocessor and a magnetic detectors strip to define the absolute position of the external magnet with respect to the measuring bar.

This device is very robust, it can bear total immersion, it has no moving electrical parts and it is very suitable for heavy duty environments.

Characteristic	Parameter
Linear sensing range	0 mm to L mm (see the available lengths)
Resolution:	0.05 mm (L ≤ 250 mm) standard 0.5 mm (L > 250 mm) standard Higher or lower resolutions available on request
Supply voltage (Val)	12 Vdc standard or 12 ÷ 30 Vdc optional
Analog output	0.5 V to 4.5 V
Digital output	RS 485,n,8,1
Supply current	230 mA typical
Linearity	0.4% full scale
Reverse polarity	26 V
Output voltage (k= magnet position in mm)	$500 + k * 4000/L$ mV (L in mm)
Output voltage at 0 mm position	0.5 V
Output voltage at L mm position	4.5 V
Update rate	1 ms
Start up time	20 ms
Termination analog: digital:	Red= Supply, Black= 0V, Green = Analog output Yellow = Rx, Orange=Tx
Cable bend radius	40 mm
Operating temperature range	-40 ÷ +125 C°
Storage temperature range	-40 ÷ +150 C°
Air gap magnet – sensor	L ≤ 250 mm: 6 ± 1 mm; L > 250 mm: 25 ± 5 mm
Sealing	IP 67
Shock	50 G half sinewave with 11 ms duration
Vibration	20 G from 0 to 2000 Hz
Housing material	Stainless steel
Magnet material	Neodymium
Magnet strength	1 Tesla
Mounting screws	M6
Mounting screws recommended torque	6 Nm to 8 Nm

Electrical Length (mm)	Dimensions and magnet position (mm)
L = 25 mm	Fig 1
L = 50 mm	Fig 1
L = 100 mm	Fig 1
L = 250 mm	Fig 1
Electrical Length (mm)	Dimensions and magnet position (mm)
L = 600 mm	Fig 2
L = 750 mm	Fig 2
L = 1500 mm	Fig 2

Fig 1:

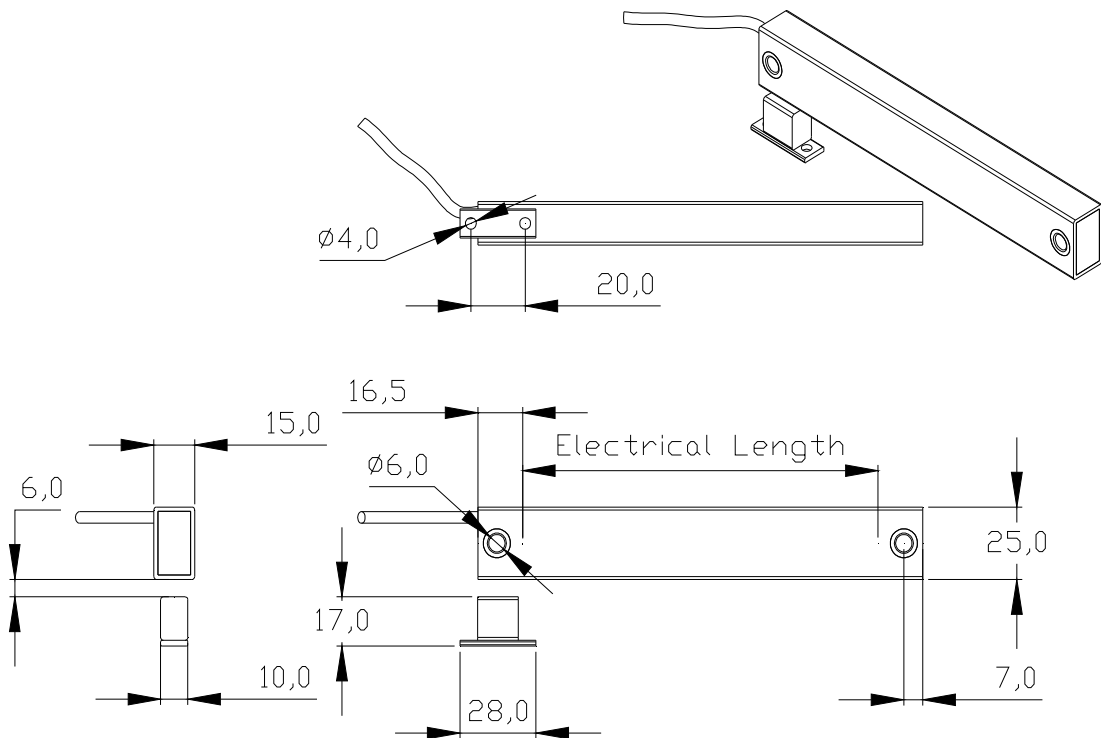
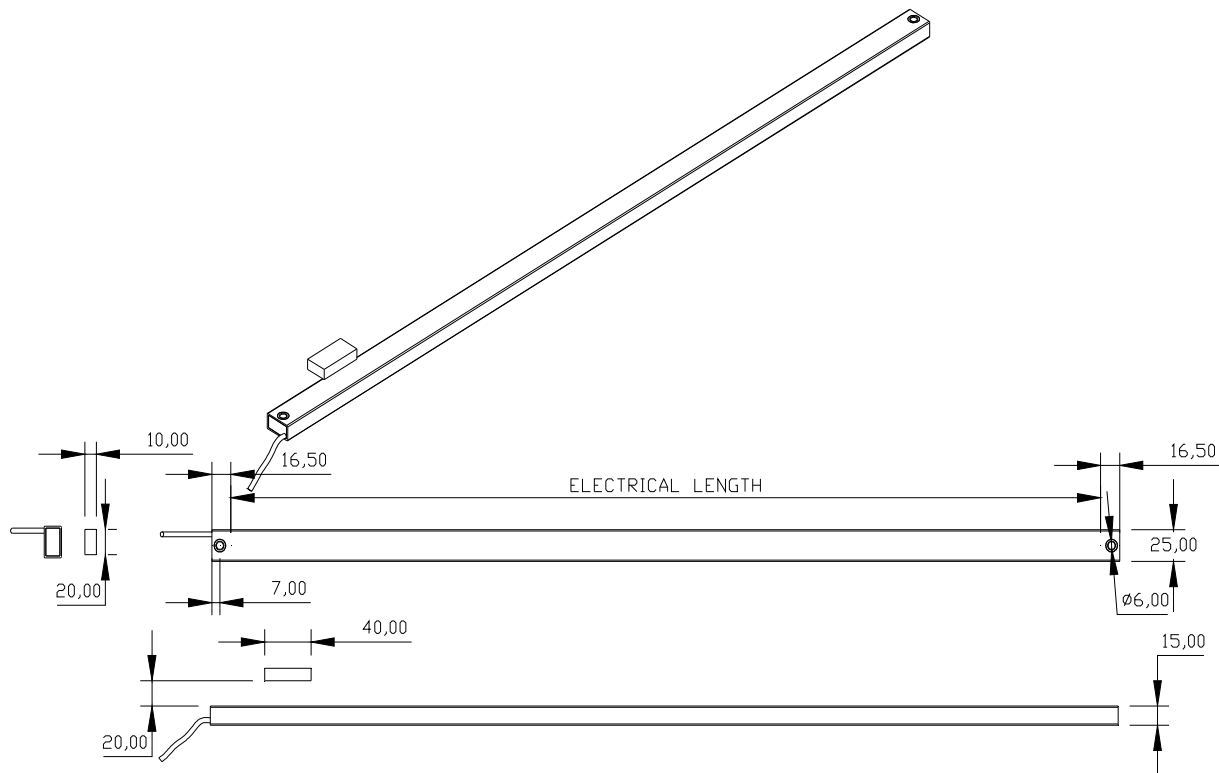


Fig 2:



Notice:

Ferrous metal within 80 mm radius of magnet may affect sensor performances.

**Warning:
PERSONAL INJURY**

DO NOT USE these products as safety or emergency stop devices or in any other application where failure of the product could result in personal injury.

Failure to comply with these instructions could result in death or serious injury.

THESE PRELIMINARY SPECIFICATIONS MAY CHANGE WITHOUT NOTICE.

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